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Vers des villes polycentriques. La restructuration des configurations spatiales intramétropolitaines en Europe

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Towards polycentric cities. An investigation into the restructuring of intra-metropolitan spatial configurations in Europe

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Introduction

- 1 With the rise of the informational economy, a new wave of change has hit urban space over the last three decades. Spatial reconfiguration has been far-reaching at the global scale, redefining the position of cities in networks of command and control centres of the world economy (Taylor, 2003). In addition, the geographies of economic activities at the intra-metropolitan scale have also been transformed significantly. Here, scholars and urban planners have been particularly concerned by the evidence that advanced service activities traditionally relying on conditions of agglomeration economies in central business districts (CBDs) are now growing rapidly in diverse out-of-core or suburban locations (Berry and Kim, 1993; Hall, 1997). These activities, in other words, are thus apparently leaving their “natural environment”.
- 2 Such trend calls into question the traditional pre-eminence of CBDs and historic inner-city districts as prime location sites for economic growth. More generally, a profound readjustment of former radio-concentric representations of internal structures of cities and associated centre/periphery models of urban land use is at play. Decentralization of routine office functions (e.g. back offices), place-consuming activities (e.g. transport and

warehousing) or household services (e.g. retail, education) has been largely initiated during post-war decades under conditions of Fordist suburbanization. However, the current phase of restructuring seems even more salient since decentralization is now driven by leading protagonists of the contemporary urban economy, i.e. informational knowledge-intensive activities (in finance and business services, creative and cultural industries, etc.) or corporate headquarters.

- 3 Unsurprisingly, such evidence has fuelled many speculations on the demise of the conditions of agglomeration and concentration that have historically given shape to the urban realm (Garreau, 1991; Illeris, 1996; Hall, 1999). Rooted in the rhetoric of the “death of distance” (i.e. the supposed placelessness of advanced telecommunication practices in a context of falling communication and transportation costs) and with the archetypal example of Los Angeles in mind, some have advanced a scenario of general dilution of the urban form, leading to the emergence of splintered urban forms without centres and borders (e.g. Waddel and Shukka, 1993; Gordon and Richardson, 1996). In a sense, the conceptualisation of an entirely disseminated urban form, “la città diffusa”, by European scholars may be seen as the European counterpart of this scenario (see Secchi, 1988; Boeri and Lanzani, 1992). The latter also echoes former predictive views such as F.L. Wright’s “disappearing city” formulated in the early 1930s, that is, at times of the emerging generalisation of the use of the telephone and the car.
- 4 However, these speculations tend to ignore the very nature of the contemporary informational economy. The rise of informational activities basically involves a reassertion – rather than a demise – of the benefits of agglomeration economies since the generation and transmission of richly-layered or strategic information mostly occur through direct interpersonal relationships and face-to-face contacts between highly-qualified professionals (Castells, 1989; Sassen, 1991). What seems new, however, is that these agglomerations economies and related mechanisms of clustering are no longer restricted to find place in inner cities or CBDs. New poles, axes or zones in different out-of-core or suburban locations can now also offer a critical mass of office premises, equipments for professional meetings and infrastructure for telecommunication and transportation that cater to the clustering of advanced service activities (Hall, 1999). These new metropolitan (sub-) centres (e.g. high-technology corridors, edge cities, suburban downtowns, etc.) come to supplement traditional inner city locations. While this trend may in some cases lead new peripheral centres to overshadow traditional inner cities in terms of volume of office-based activities (e.g. Fujii and Hartshorn, 1995 on Atlanta), it seems more likely to entail in the European context the emergence – or consolidation – of multi-nucleated, polycentric intra-metropolitan configurations. In line with earlier works that have given substance to this scenario (Berry and Kim, 1993; Hall, 1997; Dessemontet, 1999; Kloosterman and Musterd, 2001; Halbert, 2004), we hypothesize that, rather than experiencing a generalized dilution of the urban form, metropolitan areas in Europe are being reconfigured with CBDs and inner-city districts no longer acting as sole or prime location for key economic activities. As Kloosterman and Musterd (2001, 626) suggest, central locations are becoming part of “*a wider spatial division of labour within the urban area*” (see also Coffey, 2000). In this framework, different tasks in the complex set of processes accounting for the generation and processing of information are accomplished by different specialized protagonists (e.g. firms, institutions, etc.) taking advantage of different specific conditions of agglomeration economies in different parts of the metropolitan space. In other words, metropolitan areas seems to move into

polycentric systems wherein urban functions are distributed among a series of (sub-)centres. Accordingly, central city locations do not vanish (see also Chapain and Polèse, 2000 for a North-American assessment), rather their role in the urban economy is re-positioned within a grid of networked (sub-)centres at the metropolitan scale.

Existing empirical assessments

- 5 The possible emergence of new polycentric configurations at the intra-metropolitan scale can be empirically assessed in various ways and by using different methodologies. Most often, existing studies combine analyses of quantitative data sets with results from enquiry of enterprises in selected case studies (e.g. Hessels, 1994 on Amsterdam; Coffey *et al.*, 1996 on Montreal; Buisson *et al.*, 2001 and Aguilera, 2002 on Lyon; Halbert, 2004 on Paris). Analysing Paris, a case study historically shaped by conditions of mono-centricity and high density in the urban core, Halbert (2004) re-evaluates spatial dynamics that have affected the metropolitan production system by comparing the spatial distribution of advanced services in the Ile de France region in 1982 and 1999. His findings are consistent with a scenario of “concentrated deconcentration”, that is, decentralisation of business service activities gives shape to a poly-nucleated metropolitan form, not a dispersed one, since growth in business services largely concentrates in a limited number of (sub-)centres. Furthermore, this development does not entail the decline of the traditional business district, but rather its enlargement to two adjacent districts (i.e. La Défense and Issy-les-Moulineaux). This widened metropolitan core further concentrates command and control business services such as finance, marketing and management activities while new out-of-core centres specialize in high-technology activities (telecommunications, engineering and R&D in south-western outer suburbs) or in wholesale trade and logistics activities (in northern inner suburbs, some *villes nouvelles* or close the Orly and Roissy airports). Hence, these results are consistent with Kloosterman and Musterd's (2001) conceptualisation of an emerging new division of labour at the metropolitan scale and the rise of multi-nucleated intra-metropolitan configurations.
- 6 Enquiries of enterprises give additional information. For instance, using an enquiry of 152 enterprises in Lyon, Buisson *et al.* (2001) have drawn significant correlations between criteria favoured by enterprises at the intra-urban scale and the location of the latter within the metropolitan area. Notably, factors like prestige of the location, proximity to a wide range of services and access to high-speed train terminals are clearly favoured by firms located in the inner city while firms in suburban zones or secondary centres give much importance to conditions of road accessibility and land availability. Such findings strongly suggest that central locations still hold a specific set of valuable assets which cannot be found in other, out-of-core locations.
- 7 However, trends of decentralization of service activities and the concomitant emergence of polycentric intra-metropolitan configurations should not be conceptualised in a too universal or mechanistic way. Such trends rather interact with varied inherited socio-spatial metropolitan configurations, shaped by specific physical conditions and economic, cultural or political contexts. Comparative studies analysing the precise extent and nature of the new, non-central (sub-)centres remain however very scarce in literature so far. This lacuna has to be related to the lack of comparable data on economic activities for small spatial units and disaggregated categories over long time series. In Europe, this

statistical information is still imperfectly harmonized at the supra-national level (clearly when compared to the situation in the USA) and retains strong national specificities.

- 8 Nevertheless, findings from some existing comparative analyses are worth mentioning. The study by Philippe *et al.* (1999) on 7 European cities (i.e. Barcelona, Birmingham, Bordeaux, Geneva-Lausanne, Marseille-Aix en Provence, Milan, Toulouse – plus Montréal) confirms the general trend towards decentralization of service activities in European agglomerations and the development of diverse out-of-core (sub-) centres. However, it highlights significant differences in emerging polycentric configurations, with some cities retaining a largely dominant inner city (in terms of concentration of key activities, prestigious sites, etc. – e.g. Barcelona, Milan) while others experience the development of relatively autonomous out-of-core centres, particularly in pre-existing urban cores (e.g. Aix-en-Provence vis-à-vis Marseille, Lausanne vis-à-vis Geneva).
- 9 Moreover, some EU-funded research programmes have tackled this issue. COST Action C10 “*Outskirts of European Cities*” has focused on dynamics in the outskirts of European cities in 14 countries. The project report clearly stresses the increase of central functions now (re)locating to the outskirts, but it also emphasizes the variation in how much activities are scattered (vs. concentrated) in the outskirts of European cities as one of the most striking findings of the research. Furthermore it particularly emphasizes the difference national planning regulations make in containing spread or organizing coherent concentration of activities (Franzén and Halleux, 2004).
- 10 Generally speaking, however, EU-funded research programmes have been much more concerned with polycentric development at the inter-urban or inter-regional scale rather than at the intra-metropolitan scale (Kloosterman and Musterd, 2001; Davoudi, 2003). This privileged perspective on urban change is in line with the call for polycentric development of the European territory put forward in the European Spatial Development Perspective (ESDP) adopted in May 1999. The EU-funded POLYNET programme (“*Sustainable Management of European Polycentric Mega-City Regions*” – European Regional Development Fund, INTERREG IIIB), for instance, deals with polycentric development at the scale of “Mega-City-Regions” in North West Europe, focussing on informational and commuting flows between centres within such regions. Significant differences arise here from the confrontation of historically polycentred Mega-City-Regions (e.g. the Rhine-Ruhr and the Rhine-Main regions in Germany, the Delta Metropolis in The Netherlands) and Mega-City-Regions historically shaped by the predominance of one single centre (e.g. Paris). Furthermore, the ESPON research programme, short for “European Spatial Planning Observation Network” (EU-community initiative Interreg III) was launched in the continuation of the preparation of the ESDP. It envisages polycentrism at European, national and regional scales, with only very marginal interest in the intra-metropolitan dimension. In this respect, ESPON’s rather modest contribution has been the building up of a purely morphological typology of European agglomerations derived from satellite land cover data (Nordregio, 2004). This typology distinguishes between 4 types of metropolitan configurations, namely “sprawl” (i.e. continuous settlements without particular groupings), “mono-centric” (i.e. predominance of a large settlement area), “polycentric” (i.e. co-presence of several groups of settlements which are distinct from each other), and “sparsely populated” (i.e. rural). Interestingly, however, this typology reveals a lack of correlation between mono- or polycentric patterns of settlement at intra-urban and inter-urban scales. In consequence, the report suggests “*that intra-urban*

settlement patterns do not determine the capacity of a city to participate in wider-scale polycentric integration" (p. 161).

- 11 This latter effort at building up a typology echoes other attempts at categorizing the variety of new intra-metropolitan centres. Most notably, P. Hall has proposed a typology of 6 "main activity centres of the late 20th century city... that create a new polycentric urban form" (Hall, 1999, p. 178). These are namely:
 - the "traditional business core" (e.g. City of London);
 - the "secondary business core" (e.g. Paris' 16th arrondissement);
 - the "tertiary business core" (or "inner edge city" – e.g. Canary Wharf in London Docklands, Potsdamer Platz in Berlin);
 - the "outer edge city" (e.g. Roissy in Paris, Amsterdam Zuidas);
 - the "outermost edge city" (Reading in the London region, Cergy-Pontoise in the Paris region) and
 - scattered "specialised concentrations of activity" (e.g. Disneyland Paris at Marne-la-Vallée) (Hall, 1999, 178) (see also Hall and Pfeiffer, 2000, 122).
- 12 This typology, however, essentially based on large metropolitan areas at the top of the global urban hierarchy, has little to say about the functional composition (i.e. the mix of activities) of each types of (sub-) centres – and the diversity of it. So far, a comprehensive typology that combines the function (i.e. type of economic activities) and morphology (i.e. type of space) of the new intra-metropolitan (sub-)centres is still lacking. Our contribution attempts to initiate the building of such a typology. It is based on different results derived from an analysis of 7 European metropolises that were brought together within the EU-funded research programme COMET (Fifth Framework Programme, Key Action "City of Tomorrow and culture heritage" – www.comet.ac.at). These cities are Amsterdam, Barcelona, Berlin, Brussels, Copenhagen, Strasbourg and Vienna.
- 13 Firstly, an enquiry of enterprises was implemented in these 7 cities in order to get hints on the factors weighing on the intra-metropolitan localisation strategies of producer service firms. Secondly, the elaboration of a typology of (sub-)centres at the intra-metropolitan scale was initiated by bringing together the expertise of scholars and institutional partners in the 7 cities of the project. From this essentially qualitative material, we seek to document empirically the nature, extent and diversity of intra-metropolitan polycentric spatial patterns in Europe. This paper ends up with a discussion on the implications of contemporary intra-metropolitan reconfigurations for both urban researchers and policy-makers.

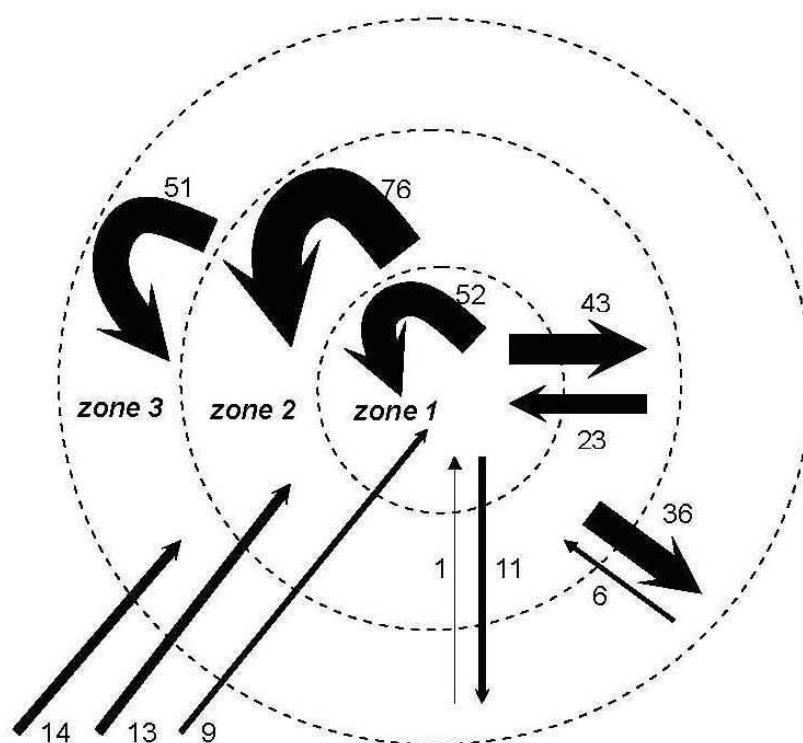
Intra-metropolitan reconfigurations: lessons from an enquiry of producer service enterprises in 7 European Cities

- 14 An enquiry of enterprises was implemented in the course of the COMET project in order to investigate the locational rationales of selected service activities. Ten groups of (mainly) producer service activities were focused on¹. Basically, enterprises were asked to rate on a 1 to 5 scale the importance of 27 pre-defined location factors². These enterprises were selected by random sampling stratified according to their type of activity (one of the ten selected groups) and location within each agglomeration. The intra-metropolitan location of the firms has been approximated by way of a division in three zones: the inner

city (zone 1), the rest of the core city (zone 2) and the suburban belt (zone 3) (see Bachmann, 2003 for further details on the delimitation of the metropolitan areas and the division in zones within them). Additional information were collected from the surveyed enterprises, notably regarding their size, scope of activity, past mobility patterns and plans for possible future change of location.

- 15 A total of 1,232 enquiries were gathered in the 7 metropolises. Globally, enterprises in the sample are small-sized (57 % having less than 10 employees), mono-establishment (71 %) and employ qualified personnel (57 % of all employees hold post-secondary diploma). About half of the enterprises (48 %) declare having their customers within the local agglomeration. In Brussels and Strasbourg, a higher proportion of enterprises in the sample have European or worldwide activities (25 % and 26 % respectively) in comparison with the mean of all seven cities (14 %). This specificity is likely to be linked to the international EU-related political status of these two cities.
- 16 Obviously, this sample is too limited to get mathematically bullet-proof statements on the locational rationales of service activities in European agglomerations. We think, however, that relevant hints on these rationales can be drawn from this material. As far as patterns of mobility are concerned, the current location of the surveyed enterprises is the original one in most cases (64 %). Amongst those firms that have changed location during the last ten years (1993-2003), most moved within the same zone (52 %), hence highlighting a pattern of short-distance mobility (fig. 1) (see also Hessels, 1994). As far as the movements between zones are concerned, those towards the periphery dominate those towards the centre in a ratio of 3 to 1 ($43 + 36 + 11 = 90$ vs. $23 + 6 + 1 = 30$) (see fig. 1). This finding is in line with comments on decentralisation of business service activities. However, no claim about an “exodus” of enterprises previously installed in the inner city towards the suburbs can be formulated on this basis: amongst the enterprises located in zone 3 in the sample, only 15 % moved from a more central location (zones 1 or 2) while 61 % were originally established in a suburban location. The remaining 24 % moved from a different location within the suburbs or from outside the metropolitan area. Hence, it appears from these results that the dynamics of suburban areas is much more a matter of creation of new businesses rather than a matter of massive transfer of activities from central locations. Coffey *et al.* (1996) reached a similar conclusion through an enquiry of 324 firms in Montreal.

Figure 1. Patterns of locational changes in the sample of enterprises (1993 – 2003). Aggregated values for the 7 cities.



SOURCE: BACHMANN (2003)

NOTE: FIRMS LEAVING AWAY THE AGGLOMERATION WERE NOT INCLUDED IN THE SURVEY.

- 17 As far as the ratings of the 27 location factors are concerned, results should be cautiously interpreted since a posteriori rationalisation – or (auto-)justification – of locational choices by respondents may be very influential in such type of enterprises survey (see e.g. Charron, 2003; Halbert, 2003). For instance, factors that were of great importance when the localisation of the firm took place may be absent of the results (or underestimated) since respondents may take them for granted at the time of the enquiry. Moreover, some factors may be particularly stressed by the respondent as part of political messages addressed by enterprises to the authorities. A striking example in this respect is given by the differentiated rating of the criteria “airport connection” by the enterprises in our sample. While this factor is on a modest 21st position when all 27 criteria are ranked in descending order of importance according to the ratings made by enterprises in the 7 cities, it appears on a much higher position (8th) for enterprises surveyed in Strasbourg. This contrast may appear peculiar at first sight since Strasbourg is the least connected city amongst the 7 COMET cities as far as air connections are considered. Rather, this result seems to express wishes by enterprises in Strasbourg to gain better air connection in the future.
- 18 In line with these comments, we assume that the kind of enquiry implemented here basically brings out discourses and representations through which enterprises express location requirements together with a series of wishes and political messages. Put another way, firms’ ratings of location factors should not be interpreted as expressing “pure” locational needs. Nevertheless, we assume that these discourses and

representations deserve attention and analysis, notably because they shape the conditions of “locational demand” local decision-makers or real estate developers have to deal with or anticipate in their daily practice.

- 19 Looking globally at the global ranking of location factors (table 1), criteria of accessibility (by car or public transports) are prominent. Proximity to customers and to the market, the prestige of the location and real estate and land prices are the other most important locational factors. These overall results are in line with findings of other similar enquiries (e.g. Hessels, 1994; Buisson *et al.*, 2001). At the bottom end of the ranking are criteria of proximity to universities and research institutions. Actually, the importance of these criteria is only significantly stressed by enterprises in R&D whose link with universities and research institutions is obvious. In addition, criteria stressing the levels of tax and subventions are given very low importance in the whole sample. This finding calls into question the often large publicity given to fiscal factors in media, political discourses or by business organisations. Only firms in Barcelona stress the level of taxes as one of the most important location factor to them, together with the prestige of the location and the availability of attractive housing. This singular result might be linked, however, to the very high proportion of firms that own their site of activity in the Barcelona's sample (78 %, compared to 39 % in the 7 cities taken as a whole), e.g. for taxes on real estate property can be an important concern for enterprises owning their site of activity.

Table 1. Global ranking of location factors in the 7 COMET cities (i.e. mean mark for each location factor, from 1 = “very unimportant” to 5 = “very important”).

location factor	AMSTERDAM position	BARCELONA position	BERLIN position	BRUSSELS position	COPENHAGEN position	STRASBOURG position	VIENNA position	GLOBAL global position
access to local traffic (roads)	3,58 1	3,53 14	3,92 1	3,58 4	3,35 7	4,05 3	3,92 1	3,70 1
parking space	3,46 4	3,76 8	3,67 4	3,74 2	3,91 1	3,37 16	3,91 2	3,67 2
access to local traffic (bus / train)	3,54 2	3,80 4	3,91 2	3,28 6	3,35 8	3,57 10	3,90 3	3,65 3
proximity to customers	3,29 7	3,78 5	3,69 3	3,33 5	3,58 2	4,21 2	3,89 4	3,64 4
road connection	3,45 5	3,18 17	3,29 10	3,62 1	3,39 6	4,44 1	3,40 11	3,50 5
prestige / image of the location	3,24 9	4,16 1	3,36 9	3,27 7	3,57 3	3,38 15	3,47 10	3,49 6
real estate and land prices	3,16 12	3,76 7	3,48 8	3,66 3	3,03 11	3,91 5	3,63 6	3,48 7
market entry / potential	3,25 8	3,72 9	3,55 6	2,89 12	3,39 5	3,99 4	3,57 7	3,47 8
qualified labour supply	2,99 15	3,71 11	3,85 5	2,76 14	3,14 10	3,62 7	3,72 5	3,37 9
availability of industrial & office areas	2,72 22	3,08 18	3,53 7	2,95 11	3,57 4	3,52 11	3,55 8	3,23 10
proximity to co-operational partners	3,21 11	2,77 22	3,21 12	2,98 9	3,27 9	3,88 6	3,49 9	3,22 11
personal reasons	3,51 3	3,45 16	3,17 13	2,67 15	2,79 15	3,18 17	3,28 12	3,20 12
quality of environment	3,40 6	3,77 8	2,82 16	2,60 17	2,68 16	3,44 14	3,13 14	3,15 13
attractive housing	3,10 13	3,88 3	2,88 15	3,19 8	3,03 12	2,98 18	2,78 18	3,13 14
level of wages	2,76 20	3,68 12	3,11 14	2,38 19	2,48 20	3,50 13	2,98 16	3,00 15
possibility of spatial expansion	2,91 16	3,07 19	3,21 11	2,79 13	2,92 14	2,48 20	3,20 13	2,97 16
railway connection	3,23 10	2,79 21	2,65 21	2,96 10	2,99 13	3,58 9	2,61 22	2,96 17
proximity to suppliers	2,84 18	2,79 20	2,61 23	2,51 18	2,64 17	3,51 12	2,78 17	2,79 18
opportunities for training (education)	2,72 23	3,72 10	2,63 22	2,24 20	2,63 18	2,17 24	3,11 15	2,77 19
co-operation with the municipal administration	2,80 19	3,48 15	2,68 19	1,97 26	2,53 19	2,69 19	2,72 20	2,75 20
airport connection	2,75 21	2,38 27	2,80 17	2,61 16	2,22 22	3,61 8	2,54 25	2,69 21
taxes (e.g. community tax)	2,71 24	4,04 2	2,58 24	2,20 21	2,01 24	1,99 26	2,57 24	2,67 22
cultural and recreational facilities (e.g. theatre)	3,00 14	2,70 24	2,76 18	2,07 24	2,41 21	2,23 21	2,72 21	2,63 23
subsidies / subventions	2,69 25	3,54 13	2,67 20	2,06 25	1,70 27	1,74 27	2,53 26	2,52 24
social facilities (e.g. kindergarten)	2,85 17	2,70 23	2,49 25	1,95 27	2,20 23	2,17 25	2,78 19	2,51 25
proximity to universities	2,66 26	2,50 25	2,47 26	2,11 23	1,83 26	2,22 23	2,58 23	2,39 26
proximity to research institutions	2,56 27	2,46 26	2,35 27	2,16 22	1,87 25	2,23 22	2,38 27	2,32 27
number of enquiries (zones 1 to 3)	226	200	251	133	150	129	134	122 3

SOURCE: COMET

- 20 Looking beyond the global ranking of location factors may take various routes. As our focus is on spatial (re)configurations of intra-metropolitan space, we have used the material gathered in the enquiry to test whether there are significant differences in the

ratings of location factors according to the effective location of the respondent. Do significant correlations emerge from the enquiry between favoured locations factors and types of location (inner cities, intermediate zones or suburban areas)? In operational terms, we have implemented an ANOVA procedure to test whether the average ratings of the 27 location factors are significantly different for enterprises located in zone 1, zone 2 or zone 3 across the 7 cities. The ANOVA procedure compares the variance within each group (i.e. firms in zone 1, 2 or 3) and between them: the null hypothesis (no significant differences between enterprises located in zone 1, 2 or 3) can be rejected if the variance within groups is significantly lower than the variance between groups (F test).

- 21 At a significance level of 95 %, the variance within groups is significantly lower than the variance between groups for (only) 9 location factors out of 27 (Table 2). It means that the null hypothesis cannot be rejected for 18 location factors. This result is very similar when considering each city individually, except for Amsterdam where the null hypothesis cannot be rejected for 10 location factors. Hence, for more than the half of the 27 listed location factors (less in Amsterdam), answers given by enterprises located in inner cities, intermediate zones or suburban areas are not significantly different. This result may be linked – at least partially – to the large share of small-sized locally-active firms in the sample since those firms are very likely to give similar (high) importance to factors like proximity to customers or proximity to suppliers whether they are located in the inner city or in suburban areas. To some extent, the same point can be made for “soft factors” like e.g. personal reasons, access to social facilities or opportunities for training.

Table 2. Importance of location factors in relation with the location of the respondents.

location factor [†]	mean rating for enterprises located in			ANOVA test		
	zone 1	zone 2	zone 3	df	F test	signification *
access to local traffic (roads)	3,62	3,83	3,61	1,263	5,254	* 0,005
parking space	3,63	3,79	3,57	1,254	3,833	* 0,022
access to local traffic (bus / train)	3,81	3,78	3,36	1,260	19,600	* 0,000
proximity to customers	3,73	3,65	3,56	1,256	1,755	0,173
road connection	3,32	3,55	3,60	1,260	5,592	* 0,004
prestige / image of the location	3,89	3,51	3,13	1,257	38,083	* 0,000
real estate and land prices	3,49	3,56	3,38	1,257	2,434	0,088
market entry / potential	3,58	3,50	3,35	1,248	3,192	* 0,041
qualified labour supply	3,57	3,39	3,17	1,254	10,101	* 0,000
availability of industrial and office areas	3,21	3,28	3,20	1,252	0,499	0,607
proximity to co-operational partners	3,37	3,26	3,05	1,257	6,339	* 0,002
personal reasons	3,10	3,19	3,30	1,246	2,130	0,119
quality of environment	3,03	3,19	3,20	1,259	2,433	0,088
attractive housing	3,26	3,11	3,05	1,256	2,860	0,058
level of wages	3,07	2,98	2,96	1,249	0,982	0,375
possibility of spatial expansion	2,90	3,02	2,98	1,255	0,894	0,409
railway connection	3,04	3,00	2,84	1,257	2,537	0,079
proximity to suppliers	2,83	2,83	2,71	1,257	1,381	0,252
opportunities for training (education)	2,83	2,78	2,71	1,255	0,855	0,426
cooperation with the municipal administration	2,72	2,68	2,84	1,256	1,867	0,155
airport connection	2,68	2,71	2,67	1,260	0,085	0,919
taxes	2,64	2,64	2,73	1,257	0,796	0,452
cultural and recreational facilities	2,81	2,68	2,42	1,254	11,041	* 0,000
subsidies / subventions	2,60	2,46	2,53	1,257	1,165	0,312
social facilities	2,51	2,53	2,49	1,254	0,131	0,877
proximity to universities	2,44	2,38	2,36	1,256	0,0471	0,625
proximity to research institutions	2,32	2,32	2,33	1,257	0,009	0,991

[†] location factors are ranked in descending order of global importance (see fig. 2).

Note: an asterisk * means that the null hypothesis can be rejected with a 95% certainty.

SOURCE: COMET

- 22 Interestingly, however, most factors for which the probability of falsely rejecting the null hypothesis is below 5 % (i.e. factors rated significantly differently by enterprises in the

different zones) are the ones heading the ranking of criteria by order of general importance (except for cultural and recreational facilities). Hence, this suggests that factors for which a noticeable difference in their ratings is recorded with regard to the location of the respondents are also globally important ones. For these factors, different combinations emerge by type of location:

- enterprises in zone 1 significantly favour access to public transport (bus/train), market entry and potential, access to qualified workforce, proximity to partners, prestige of the location and access to cultural and recreational facilities;
- firms located in zone 2 favour access to road infrastructures and parking;
- finally, road connection is particularly stressed by enterprises located in zone 3.

- 23 These results indicate a dichotomy between enterprises in central (zone 1) and non-central (zones 2 and 3) locations, with a strong emphasis put on conditions of road accessibility by enterprises in out-of-core or suburban locations. This finding is coherent with existing statements linking the growth dynamics of diverse peripheral locations in metropolitan areas to specific assets of car accessibility and connections to motorways networks. Moreover, a coherent series of location factors is stressed by enterprises located in inner cities. This suggests that central locations still hold a series of specific assets valued by advanced service activities, notably the prestige of the location, conditions of accessibility by mass public transport, centrality of the market area and access to a vast (qualified) labour market area. More surprisingly (given the fact that in all COMET cities – but Amsterdam – the peak of land value for office space is in the CBD), the importance of real estate and land prices is not significantly different for enterprises located in the three zones – unless the signification level is lowered to a 90 % threshold. Moreover, this factor is mostly stressed by enterprises in central locations (zone 1 or 2), not by firms in suburban locations. It is likely that firms in the survey have evaluated the level of real estate and land price with reference to a more local scale (i.e. inside each zone) than the one expected beforehand (i.e. between zones).
- 24 Nevertheless, findings brought out of the enquiry support the statement that current trends of decentralisation of advanced service activities do not entail the demise of the conditions that shape the attractiveness of central locations within metropolitan areas. To what extent this result is coherent with the transformation of intra-metropolitan geographies of service activities towards polycentric configurations is not implied by the kind of enquiry implemented here. Going one step further with the investigation of this hypothesis needs additional empirical efforts. The next section of this paper builds on other results of the COMET project for this purpose.

The nature and diversity of intra-metropolitan configurations

Towards a typology of metropolitan centres

- 25 Apart from a collection of information from enterprises, a complementary approach to the issue of changing economic geographies in metropolitan areas can be built from the expertise of those actors dealing with such issue in their daily work and practise. In this respect, the COMET project has brought together for almost 3 years academic teams (in geography or planning departments) and institutional actors (mostly in administrations

of urban economic development or planning)³ in the 7 partner-cities. Hence, a substantial amount of expertise was then available, that is, previous research works by academics and daily work experience of practitioners with issues of metropolitan spatial development. This information has been set in a common framework for compilation and comparative analysis over the 7 individual case studies.

- 26 Concretely, each team has been asked to compose a list of relevant (sub-)centres in their own metropolitan area, that is, each of the major zones hosting a significant amount of service jobs (min. 5,000 jobs). All service activities have been taken into account here, not only advanced producer service activities. Though the latter are important and rapidly growing sectors in western urban economies (Illeris, 1996), the economic bases of the COMET case studies are indeed still largely made of other service activities (table 3).

Table 3. The service sector in the COMET case studies.

	% of GDP in the service sector	% of GDP of the service sector in business services
Amsterdam	80.4%	24.7%
Barcelona	61.3%	17.4%
Berlin	80.4%	40.2%
Brussels	82.9%	32.1%
Copenhagen	84.1%	30.1%
Strasbourg	66.7%	24.4%
Vienna	81.6%	27.4%

SOURCE: EUROSTAT- DATA FOR THE YEAR 2000, AT NUTS 2 OR NUTS 3 LEVEL

NOTE: AMSTERDAM = NOORD HOLLAND; STRASBOURG = LOW RHINE; COPENHAGEN = KØBENHAVN OG FREDERIKSBERG KOMMUNER AND KØBENHAVNS AMT; BRUSSELS = BRUSSELS-CAPITAL REGION, VLAAMS BRABANT AND BRABANT WALLON; BARCELONA = CATALONIA.

- 27 In order to look beyond the morphological dimension of the new intra-metropolitan configurations, no a priori assumption has been made on possible correspondences between types of activities and types of spaces in the seven case studies. In sum, the typology basically addresses the following issues:
- which are the recurrent types of (sub-) centres currently developing in European metropolitan areas ?
 - do the same combinations of types of service activities develop in the same types of intra-metropolitan locations throughout the 7 case studies ? Inversely do the same types of intra-metropolitan locations host the same types of activities ?
- 28 This approach must be conceived as a primarily exploratory one that certainly calls for further elaboration, particularly quantitative, such as analyses based on comparable sets of employment and business data in different European metropolises. Basically, we aim at offering a sketch on the actual existence and variety of ongoing development towards more polycentric intra-metropolitan economic geographies in Europe. It is our hope that this effort could provide hints for further investigations. Moreover, the sample of case studies brought together in COMET, though diversified, accounts only for a part of the diversity of the urban scene in Europe. Four cities in the sample are national capital cities (i.e. Berlin, Brussels, Copenhagen, Vienna) and two act as EU capital cities (Brussels and Strasbourg). Amsterdam, Barcelona and Copenhagen are important port cities. There is, however, no first-order global city like London or Paris in the sample. In Beaverstock *et al.*'s (1999) hierarchy of world cities, cities in the sample rank amongst second-tier

(Brussels) or third-tier (Amsterdam, Barcelona, Berlin, Copenhagen) world cities while Vienna is on a lower level and Strasbourg not included in the hierarchy. Moreover, no cities with a heavy industrial past like Manchester, Essen or Lille are included here. Possible generalizations from our results should thus be taken with caution.

- 29 From the compilation of the seven individual tables, a synthetic typology has been built up. Seven recurrent types of (sub-) centres have been brought out of the case studies (table 4). They are successively presented below. Polycentric configurations are made of the various possible combination of these (sub-)centres at the metropolitan scale.

Table 4. Typology of metropolitan centres.

CENTRE	MIX OF ACTIVITIES	TYPE OF LOCATION*	Included in a large-scale planned urban project?	(estimated)level of real-estate prices	found in COMET cities?
a political centre	political institutions and administrations; various specialized services (e.g. lawyers, consultants, lobbies, NGOs, embassies)	«government district» in the inner city (with possible distinction between seat of national/regional institutions and seat of international ones), with high connection to public transport net	no	high to highest	national or regional capital, but Amsterdam, supra-national, especially Brussels, Vienna, and Strasbourg to a lesser extent
b business centre – command and control	finance, insurance and real estate; HQs of large firms; advanced business services (e.g. accountancy, management consultancy, labour recruitment)	inner city CBD and 19 th or early 20 th prestigious extensions of the inner city	no	high to highest	all
		new very modern city centres in the inner city (Berlin) or at the edge of the outer city (Amsterdam)	yes		Amsterdam (Zuidas), Berlin (Potsdamer Platz)
c business centre – technology and creation	advanced business services (e.g. information technologies, telecommunications, engineering); new media; possibly back offices	modern office parks at the edge of the core city with high-level internal and external connections	case-dependent	low to medium	Amsterdam (Toekomst), Brussels (Zaventem area), Strasbourg (innovation park)
		redeveloped former industrial areas in the inner city (e.g. waterfront)	yes	medium to high	Barcelona, Berlin, Copenhagen

*Note on terminology: «core city» refers to densely built-up area, «inner city» refers to the central part of the core, classically made up of the CBD, the historic centre, retail and tourist districts.

CENTRE	MIX OF ACTIVITIES	TYPE OF SPACE	Included in a large-scale planned urban project?	(estimated)level of real-estate prices	found in COMET cities?
d culture and retail centre	culture; entertainment; retail; urban tourism, with a specificity in high-end segments	historic inner city (with some possible decentralized spots)	no	high	all
e mass consumption centre	mass retail and entertainment	core city (main and secondary centres)	no	medium to high	all
		traffic junction in the suburbs	case-dependent	low	all but Amsterdam and Barcelona
f education and knowledge centre	higher education; R&D activities	historic locations of universities in the core city (often weak links between education and private R&D)	no	medium	all
		new out-of-core planned innovation/science parks (stronger links)	yes		Berlin (Adlershof), Strasbourg (Illkirch), Vienna (Tech Gate), Brussels (Louvain-la-Neuve)
g Logistics centre	transport; logistics; wholesale trade activities	suburban spots along motorways, especially at major road junctions, and diverse additional spots with a specific link to a major traffic infrastructure (e.g. airport, harbour)	no	low to medium	all (but specificity of port cities)
h International airport centre	transport; HQ of large firms; specialized business services (e.g. congress centres)	spot alongside a large international airport	no	medium	Amsterdam (Schiphol)

SOURCE: AUTHORS' SURVEY AMONGST COMET TEAMS

Political centre

- 30 A first recurrent type of centre to emerge from the compilation of the 7 case studies is one made of the concentration of political activities. All cities involved in COMET (but Amsterdam) have a strong historically-asserted role as seat of government, either as national or regional capital city (Berlin, Barcelona, Brussels, Vienna, Copenhagen) and/or as supra-national political centre (Brussels, Strasbourg, Vienna). The presence of political

institutions defines specific conditions of agglomeration economies that some specialist service activities find vital to tap into. Amongst cities in our sample, this is very much the case in Brussels where a wide range of activities like lobbies, NGOs, international law or consultancy firms, etc. have increasingly clustered in the inner city over the last decades in order to take advantage of direct proximity of influent public institutions (i.e. extended opportunities for face-to-face contacts), the European Commission most notably (Elmhorn, 2001; Van Criekingen *et al.*, 2005).

- 31 This type of activities clearly favours central locations within metropolitan areas, classically composing “government districts” in the inner city. This geography is largely a product of history, with criteria of prestige playing an important role. Today, central locations are very convenient for administrative functions with a large sedentary workforce since they are usually served by a dense net of mass public transport. Moreover, in cities hosting supranational political institutions alongside national or regional bodies, the political centre is often divided in two distinct government districts, with the supranational government district typically in less central locations than the national or regional one (e.g. in Vienna and Strasbourg – like also in Luxembourg or Geneva – but not in Brussels).

Business centre – command and control

- 32 This centre is based on business functions long-established in large metropolises, most notably banking and insurance, corporate headquarters and a wide range of business services (e.g. accountancy, law, management consultancy, labour recruitment). These sectors compose classically the cornerstone of central business districts, within the historic inner city or its 19th or early 20th century extensions. Nevertheless, some cities have engaged in the last decades in projects of new city centre development in order to accommodate activities now viewed as the command and control functions of the world economy. In our sample, this is the case in Amsterdam (i.e. the Zuidas and, to a lesser extent, the Arena) and Berlin (i.e. Potsdamer Platz most notably). In both cases, the development of a new city centre results from a large-scale commercial urban project backed with very substantial public inputs in transport infrastructures and urban amenities. However, the physical location of these new city centres varies: while Amsterdam’s Zuidas has been developed at the edge of the core city, the development of Potsdamer Platz in Berlin plays on the availability of large pieces of land in the inner city as a consequence of the fall of the wall.

Business centre – technology and creation

- 33 Rapid technological progress over the last decades has given rise to a wide range of new knowledge-intensive activities in information technologies and telecommunication, engineering or the new media. The comparison of cities in our sample highlights two different types of intra-metropolitan locations wherein such activities are developing. In some cities, a centre of high-tech service activities is mostly expanding at the edge of the core city through the development of office parks fully-equipped with modern information and telecommunication facilities (e.g. the Teleport / Sloterdijk scheme in Amsterdam, the Zaventem area in Brussels, innovation parks in Strasbourg) while in other cities the development of this type of centre takes place to a large extent in recycled former-industrial areas in the central city (e.g. the 22@ district in Barcelona, the

river Spree waterfront and the breweries area in Berlin, the harbourfront area in Copenhagen). Hence, the comparison of the case studies brings out that a similar mix of activities may develop in different types of locations at the intra-metropolitan scale. The pattern is more confused in Vienna, showing multiple concentrations in different locations throughout the metropolitan area.

Culture and retail centre

- 34 European metropolises are long-established centres of cultural and retail activities. Within metropolitan spaces, this centre is traditionally located in central and historic districts (e.g. location of theatres, cinemas, shops, tourist facilities, etc.). However, culture, entertainment, retail and tourism are also currently developing fast in decentralized locations (see next item), but still the specificity of the inner city in the high-end segments of culture and retail remains.

Mass consumption centre

- 35 The rise of the mass consumption centre is basically associated with the development of large suburban retail and entertainment outlet premises structured around car-based facilities (e.g. retail warehouses, shopping malls, cine-complex). This development exerts strong pressure on traditional mass retail function in the core city, but it does not entail a global demise of retail activity in inner cities since development of specialized shops, leisure activities or ethnic-based shops may occur concomitantly in central neighbourhoods. Furthermore, a distinction has to be made here between cities wherein market-led suburban development of mass consumption premises are not framed by strong land use public regulation (e.g. in Brussels) and cities with restrictive policy towards large retail outside the inner city (e.g. in Amsterdam). As the case of Ørestad in Copenhagen shows, the development of a suburban mass consumption centre may also be framed as part of a large-scale planned development strategies.

Education and knowledge centre

- 36 Large universities are historically anchored in urban environments, especially in central districts. Today, the link between historic locations of universities and centres of knowledge-based activities is diminishing since R&D activities are increasingly linked to the activity of large trans-national companies. In this context, some cities have engaged proactively in the planning of new infrastructure designed to link high education and private R&D activities. These projects consist in the relocation of large education facilities from the core city towards out-of-core spots (e.g. innovation parks in Strasbourg, Adlershof in Berlin, Tech Gate in Vienna). Louvain-la-Neuve (35 km south-east of Brussels) is a very particular case since the university and its related business park composes the core of a new town built up by the late 1960s in order to host the French-speaking university following the separation of the latter from the Dutch-speaking one in Leuven.

Logistics centre

- 37 The last important centre brought to the fore by the analysis of the seven case studies is based on transport, logistics and wholesale activities. This centre displays a clear link

with traffic infrastructures, either at major motorways intersections or close to major infrastructure such as airports and harbours.

Recurrences and diversity in polycentric metropolitan configurations

- 38 A major feature to emerge from the typology outlined above is that all 7 case studies are distinctly shaped by a inherited spatial configurations within which the inner city remains the major and most multi-functional centre. The comparative analysis stresses inner city locations as unique loci wherein different functions overlap and interact, namely political, business (command and control, technology and creation), culture, retail, education and tourism ones. No other parts of the metropolitan areas show any equivalent to this superposition of functions. Nevertheless, parallel developments in new out-of-core centres are striking, especially in logistics, mass consumption and advanced business services (in technology and creation rather than in finance and command). Hence, speculations on the emergence of comprehensively disseminated urban forms are clearly invalidated by the evidence gathered here. Rather than suggesting an undifferentiated demise of the traditional urban core, the analysis of the 7 cities in COMET supports the scenario of poly-nucleation of intra-metropolitan configurations.
- 39 An individualized look on the cities suggests, however, that the model of emerging polycentric intra-metropolitan configurations has to be assessed with much care since significant differences arise from inter-urban comparisons.
- 40 Firstly, comparisons bring out that similar activities can develop in different types of intra-metropolitan locations in different cities. In particular, advanced business services in technology and creation mostly develop in newly-built office parks at the edge of the core city in Amsterdam, Brussels and Strasbourg while these activities develop to a large extent in recycled former-industrial areas in the core city, especially in redeveloped waterfront sites, in Barcelona, Berlin and Copenhagen. This contrast highlights a lack of systematic correspondence between the nature of the spaces that fulfil the locational requirements of enterprises and the actual geographical location of these spaces within the metropolitan area. For instance, both suburban office parks and recycled central areas can offer attractive high-standard (new or recycled) office premises, conditions of accessibility and levels of real-estate prices that cater to the requirements of the same types of advanced service activities.
- 41 Secondly, the shape of intra-metropolitan configurations vary from one city to the other, materializing variations in the balance between the persisting singularity of the inner city and the development of new centres in out-of-core locations. Among the cities in our sample, the model of polycentric intra-metropolitan configuration probably best fits to *Amsterdam*. Highly dynamic sub-centres have developed since the 1970s on the southern (e.g. Zuidas) and western (e.g. Teleport at Sloterdijk) edges of the core city (but still on the territory of the municipality of Amsterdam) at the intersection of radial communication lines (railway and highway lines) and the ring (highway and metro line). Moreover, with the development of Schipol as a major airport in Western Europe, a new highly dynamic centre has grown in the southwestern fringe of the city. It is structured around classic airport-related activities (i.e. transport and logistics) but it is also highly attractive to headquarters of large transnational companies and specialized activities servicing a highly mobile transnational business elite (e.g. congress centres, business

hostels). However, this attractiveness is related to the fact that Schipol is not simply a sub-centre of the Amsterdam metropolitan area, but a centre servicing the four cities of the Randstad. Present-day distribution of real-estate and land prices for office spaces in the metropolitan area reflect this development, with prices in the most competitive out-of-core locations, namely Zuidas and Schipol, now exceeding prices in the historic inner city. This situation is unique amongst the sample of cities analysed in COMET. Moreover, the existing polycentric shape of the Amsterdam metropolitan area – set in a wider polycentric spatial system (the Randstad or Delta Metropolis) – is linked since the 1970s to deliberate planning options. On the one hand, strong options of heritage preservation, protection of the residential function and tourist development are enforced in the central city while, on the other hand, the growth in new advanced service activities is directed towards new centres at the edge of the core city (Bertolini *et al.*, 2003). Hence, this framework rests upon a concept of functional complementarity between the different (sub-)centres of the metropolitan area, both between central and out-of-core locations and between different out-of-core centres. Moreover, this option is backed with large investment in the inter-connections of the multiple (sub-)centres by mass transport infrastructures.

- 42 By contrast, trends of poly-centric development in *Brussels* take place in a very different context. Given the confinement of the city limits to the sole core part of the metropolitan area (i.e. the Brussels Capital Region), the absence of any metropolitan-wide planning authority and tensions between the three Belgian regions (i.e. Brussels, Flanders and Wallonia), current polycentric developments in Brussels entail many issues of territorial rivalry between the core city and its Flemish or Walloon suburbs. This results in a lack of public transport inter-connections between the different sub-centres of the metropolitan area (e.g. between the very dynamic office concentrations around the airport in Zaventem and the inner city) (Lennert and Van Crielingen, 2003).
- 43 A similar though less pronounced situation comes out in the case of *Vienna*. Territorial rivalry between the City of Vienna and its surroundings is particularly significant regarding retail activities, with city planners promoting the development of new urban retail complexes to retain shoppers in the core city (e.g. recycling of the Wiener Gasometer into a shopping mall). An additional element here is the weight of conservative restrictions on new office spaces in the inner city (policies of musealisation, monument and heritage protection, “soft renewal”).
- 44 In *Copenhagen*, *Berlin* and *Strasbourg*, the significance and shape of polycentric development appear largely dependent upon the future fate of ongoing large-scale out-of-core projects (i.e. Ørestad in Copenhagen, Adlershof and others in Berlin, innovation parks in Strasbourg) and their balance with new developments within the core city. This is particularly striking in Berlin where over-optimistic analyses of potentials for urban economic growth following the fall of the iron curtain have led to massive investment in new office development in the former zone of the wall.
- 45 Finally, the case of *Barcelona* highlights a situation wherein trends of metropolitan polycentric development remain quite marginal in comparison with the significance of the traditional monocentric urban configuration. The position of the inner city is actually purposely reinforced by strategies of urban planning focussing on the recycling of former industrial areas in central locations in order to accommodate new development in service activities (e.g. Olympic village, Forum 2004, Diagonal Mar, 22@).

- 46 In sum, a series of influential elements affect the extent and shape of the reconfigurations of intra-metropolitan spatial patterns in the 7 COMET cities. These are namely the inherited socio-spatial structure of the metropolitan area (Berlin is a case in point in this respect), the politico-administrative context and differences in planning strategies. Regarding the latter element, the implementation of large-scale urban projects are notable push-factors towards the emergence and consolidation of polycentric configurations. Such projects are of various types and size, notably development of new CBDs (e.g. Berlin Potsdamer Platz, Amsterdam Zuidas, Paris La Defense), redevelopment of former industrial sites (e.g. waterfront sites in Barcelona, Berlin, Copenhagen) or planning of out-of-core innovation or science parks (e.g. in Berlin, Strasbourg, Vienna). Beyond these large-scale “flagship” schemes, further analyses are needed to see whether other, less spectacular but still pro-active forms of public intervention do play a role in the emergence and consolidation of polycentric configurations (e.g. granting of financial advantages or facilities for selected firms, targeted investments in site equipment).

Conclusion: Implications for urban planning and research

- 47 From the results outlined above, we can conclude that instead of a scenario of generalized dilution of the urban form and demise of the central city, European metropolitan areas show a scenario of emergence and further consolidation of polycentric configurations. A range of preoccupations should consequently be placed on the top of the agendas of both urban planners and urban researchers.
- 48 First, these developments call for a change in the way we represent metropolitan space. In this respect, the use of simple centre-periphery gradients seems no longer relevant to understand contemporary reconfigurations of metropolitan areas – while this type of representation may well remain valid to grasp structures inherited from earlier phases of urban development. Rather, the model of a network – or system – of diversely specialized centres at the intra-metropolitan scale seems much more appropriate to grasp ongoing development (see also Hall, 1999). The simple centre-periphery representation, however, is still powerful in cities where the metropolitan area is truncated by existing politico-administrative divisions between the core city and the rest of the metropolitan territory, bringing many issues of territorial rivalry between “the centre” and “the periphery”. This is notably the case in Brussels and Vienna, where highly significant out-of-core developments take place outside the city limit.
- 49 In front of emerging poly-centric metropolitan configurations, urban authorities face the challenge of making the multiple (sub-) centres work together, in a kind of integrated network of complementary clusters of activities. This notably implies meeting new requests for facilities and equipments in terms of connections between the different (sub-)centres of the metropolitan ensemble. The importance given to criteria of accessibility by enterprises surveyed in the seven COMET cities may – at least partially – be linked to this point. Amongst these cities, Amsterdam’s present-day frameworks and strategies of urban planning seem to be the ones that rest most clearly upon conceptualisation of the metropolitan space as a polycentric system. Most notably, Amsterdam planners have very markedly invested in new public transport facilities, both for external accessibility (i.e. the Schiphol airport) and for internal public-transport connections between the different

dynamic (sub-)centres of the metropolis (i.e. the inner city, Zuidas, Teleport, Schipol, Arena). By contrast, the single public transport connection between the two major economic centres in Brussels (i.e. the inner city and the area around the airport) is a local bus that takes half an hour for 5 kilometres. This situation clearly mirrors dimensions of internal politico-economic rivalry between authorities ruling the core city (i.e. the Brussels Capital Region) and the out-of-core territories (the Flemish Region in this case).

- 50 In addition, further research is necessary to assess the nature and importance of the flows between the multiple (sub-)centres within metropolitan areas – as well as between poles in different cities (Halbert, 2004). To what extent each of these new centres are linked through flows of people, information and activities with other ones and with the inner city as well as with centres in other metropolitan areas is a crucial issue that requires further empirical investigations.

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NOTES

1. 1. Research & Development (NACE: 73.1 – 73.2), 2. Consulting services (NACE: 74.1 ; 74.4), 3. Technical & engineering services (NACE: 74.2 ; 74.3), 4. Predominantly blue-collar business services (NACE: 74.5 – 74.8), 5. Finance & Insurance (NACE: 65.1 ; 65.2 ; 66.0 ; 67.1 ; 67.2), 6. Real estate (NACE: 70.1 – 70.3), 7. Telecommunications, Computer & Electronic data processing (NACE: 64.2 ; 72.1 – 72.6), 8. Press & Media (NACE: 92.1 ; 92.2 ; 92.4 ; 22.1), 9. Culture & Entertainment (NACE: 92.3 ; 92.7), 10. Activities of Membership Organisations n.e.c. (NACE: 91.1 – 91.3).

2. The question was: "How important were the following location factors for your business location within the region of (the city) ?"

3. The complete list of partners involved in Comet is available on www.comet.ac.at.

Although Amsterdam is the capital city of the Netherlands, it is neither the seat of the Dutch government, nor the capital city of the Province North-Holland. Public administration activities are thus almost exclusively related to governing Amsterdam and they are not clustered but rather decentralised in about 10 district councils, each with their own "city" hall and administration.

ABSTRACTS

In this paper, we explore the hypothesis that contemporary geographies of economic activities within metropolitan areas in Europe are moving into polycentric configurations. Our contribution is based on results derived from an analysis of 7 metropolises that were brought together within the EU-funded research programme "COMET" (namely Amsterdam, Barcelona, Berlin, Brussels, Copenhagen, Strasbourg and Vienna). We first build on an enquiry of enterprises in these 7 cities, then document the nature and localisation of the multiple metropolitan (sub)centres by bringing together the expertise of scholars and institutional partners in each city – case study. The paper ends up with a discussion on the implications of contemporary intra-metropolitan reconfigurations for both urban researchers and policy-makers. Our results confirm the starting hypothesis, that is, far from a scenario of generalized dilution of the urban form, European metropolitan areas show the emergence of (diverse) configurations wherein urban functions are distributed among a series of (sub-)centres, with CBDs and inner-city districts no longer acting as sole location for key economic activities.

Cet article examine l'hypothèse selon laquelle la géographie actuelle des activités économiques à l'intérieur des zones métropolitaines en Europe évolue vers des configurations polycentriques, ceci sur base des résultats d'une analyse de 7 métropoles (Amsterdam, Barcelone, Berlin, Bruxelles, Copenhague, Strasbourg et Vienne) réunies au sein du programme de recherche "COMET" financé par l'Union Européenne. A partir d'une enquête réalisée auprès d'entreprises établies dans ces 7 villes, nous décrivons la nature et la localisation des nombreux (sous-)centres métropolitains en nous basant sur les compétences réunies de spécialistes et de partenaires institutionnels dans chacune des villes (études de cas). L'article se termine par une analyse des

implications des reconfigurations intra-métropolitaines contemporaines au niveau des chercheurs et des politiques. Nos résultats confirment l'hypothèse de départ: loin d'un scénario de dilution généralisée de la forme urbaine, l'étude des zones métropolitaines européennes montre l'émergence de (diverses) configurations où les fonctions urbaines sont redistribuées en une série de (sous-)centres, où CBD et districts internes ne constituent plus l'unique localisation des principales activités économiques.

INDEX

Mots-clés: configurations polycentriques, zones métropolitaines, Europe, enquêtes auprès des entreprises, typologie

Keywords: polycentric configurations, metropolitan areas, enquiry of enterprises, typology

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